



Patent

Attorney's Docket No. 034008-027

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

S.A. RUBIN et al.

Application No.: 09/010,377

Filed: January 21, 1998

For: TREATMENT OF VIRAL
ENCEPHALITIS BY AGENTS
BLOCKING ALPHA-VLA-4 INTEGRIN
FUNCTION

)
)
) Group Art Unit: 1644

)
) Examiner: Phillip Gambel, Ph.D.

)
) Confirmation No.: 8602

**FOURTH INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge \$_____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of \$_____ is enclosed for the fee due.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: October 23, 2003

By: Jay F. Williams
Jay F. Williams
Registration No. 48,036

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620



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FOURTH
INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

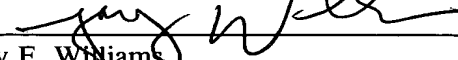
The information is submitted before the mailing of a first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. § 1.114. Since the documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b) no fee or statement is required.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner-initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: October 23, 2003

By: 
Jay F. Williams
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Substitute for forms 1449A/PTO & 1449B/PTO

**FOURTH INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

ATTORNEY'S DKT No.

034008-027

APPLICATION NO.

09/010,377

APPLICANT

S.A. RUBIN et al.

FILING DATE

January 21, 1998

GROUP

1644

U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes No

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
/	ZEIDLER et al., "Therapeutic Effects of Antibodies Against Adhesion Molecules in Murine Collagen Type II-Induced Arthritis", <i>Autoimmunity</i> , 1995, pp. 245-252, vol. 21, Taylor & Francis Health Sciences, London, England
/	BLUE et al., "Enhancement of CD-2 Mediated T Cell Activation by the Interaction of VLA-4 with Fibronectin", <i>Cellular Immunology</i> , 1991, pp. 238-244, vol. 138, Academic Press, Orlando, Florida.
/	GARCÍA-VICUÑA et al., "VLA family in rheumatoid arthritis: evidence for <i>in vivo</i> regulated adhesion of synovial fluid T cells to fibronectin," <i>Clinical and Experimental Immunology</i> , 1992, pp. 435-441, vol. 88, Blackwell Scientific Publications, Oxford, England.
/	ISSEKUTZ et al., "T Lymphocyte Migration to Arthritic Joints and Dermal Inflammation in the Rat: Differing Migration Patterns and the Involvement of VLA-4," <i>Clinical Immunology and Immunopathology</i> , 1991, pp. 436-447, vol. 61, Academic Press, Orlando, Florida.
/	ISSEKUTZ et al., "Treatment of established adjuvant arthritis in rats with monoclonal antibody to CD18 and very late activation antigen-4 ingegrins suppresses neutrophil and T-lymphocyte migration to the joints and improves clinical disease," <i>Immunology</i> , 1996, pp. 569-576, vol. 88, Blackwell Science Ltd., Oxford, England.
/	ELICES et al., "Expression and Functional Significance of Alternatively Spliced CS1 Fibronectin in Rheumatoid Arthritis Microvasculature", <i>Journal of Clinical Investigation</i> , 1994, pp. 405-416, vol. 93, American Society for Clinical Investigation, New Haven, CT.
/	MIYAKE et al., "β1 Integrin-mediated Interaction with Extracellular Matrix Proteins Regulates Cytokine Gene Expression in Synovial Fluid Cells of Rheumatoid Arthritis Patients," <i>Journal of Experimental Medicine</i> , 1993, pp. 863-868, vol. 177, Rockefeller Univ. Press, New York, New York.
/	ISSEKUTZ et al., "Rat Blood Neutrophils Express Very Late Antigen 4 and it Mediates Migration to Arthritic Joint and Dermal Inflammation", <i>Journal of Experimental Medicine</i> , 1996, pp. 2175-2184, vol. 183, Rockefeller Univ. Press, New York, New York.

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. **SEND TO:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.